AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior listing of claims in this application.

1. (currently amended) A capacitor, comprising:

an electrode having at least one layer comprising a platinum-rhodium material and at least one non-oxide layer comprising a platinum material formed on top and in contact with the platinum-rhodium layer, wherein the layer comprising platinum-rhodium comprises approximately 3 to approximately 40 percent rhodium and approximately 60 to approximately 97 percent platinum.

2. (canceled)

3. (canceled)

4. (original) The capacitor of claim 1, wherein the platinum-rhodium layer has a thickness within the range of about 100 to about 800 Angstroms.

5. (original) The capacitor of claim 1, wherein the platinum-rhodium layer has a thickness within the range of about 150 to about 300 Angstroms.

6. (original) The capacitor of claim 1, wherein the platinum layer has a thickness within the range of about 50 to about 300 Angstroms.

7. (original) The capacitor of claim 1, wherein the platinum layer has a thickness within the range of about 50 to about 150 Angstroms.

8. (original) The capacitor of claim 1, further comprising a titanium layer beneath the platinum-rhodium layer.

9. (original) The capacitor of claim 8, wherein the titanium layer has a thickness within the range of about 60 to about 200 Angstroms.

10. (original) The capacitor of claim 8, wherein the titanium layer has a thickness within the range of about 60 to about 100 Angstroms.

11. (original) The capacitor of claim 8, further comprising a titanium nitride layer beneath the titanium layer.

12. (original) The capacitor of claim 11, wherein the titanium nitride layer has a thickness within the range of about 100 to about 200 Angstroms.

13. (original) The capacitor of claim 11, wherein the titanium nitride layer has a thickness within the range of about 100 to about 150 Angstroms.

14. (currently amended) A capacitor, comprising:

a lower electrode comprising at least two layers, said first layer comprising a platinum-rhodium material and a second non-oxide layer comprising a platinum material ~~on top of~~ in direct contact with the platinum-rhodium layer, wherein the layer consisting of platinum-rhodium is an alloy comprising approximately 3 to approximately 40 percent rhodium;

an upper electrode; and

a dielectric layer of a ferroelectric or high dielectric constant dielectric material formed between said lower and upper electrodes, wherein said dielectric layer is in contact with the platinum layer of said lower electrode.

15. (original) The capacitor of claim 14, wherein the platinum-rhodium layer comprises an alloy comprising approximately 60 to approximately 97 percent platinum.

16. (canceled)

17. (original) The capacitor of claim 14, wherein the platinum-rhodium layer has a thickness within the range of about 100 to about 800 Angstroms.

18. (original) The capacitor of claim 14, wherein the platinum-rhodium layer has a thickness within the range of about 150 to about 300 Angstroms.

19. (original) The capacitor of claim 14, wherein the platinum layer has a thickness within the range of about 50 to about 300 Angstroms.

20. (original) The capacitor of claim 14, wherein the platinum layer has a thickness within the range of about 50 to about 150 Angstroms.

21. (original) The capacitor of claim 14, further comprising a titanium layer beneath the platinum-rhodium layer.

22. (original) The capacitor of claim 21, wherein the titanium layer has a thickness within the range of about 60 to about 200 Angstroms.

23. (original) The capacitor of claim 21, wherein the titanium layer has a thickness within the range of about 60 to about 100 Angstroms.

24. (original) The capacitor of claim 21, further comprising a titanium nitride layer beneath the titanium layer.

25. (original) The capacitor of claim 24, wherein the titanium nitride layer has a thickness within the range of about 100 to about 200 Angstroms.

26. (original) The capacitor of claim 24, wherein the titanium nitride layer has a thickness within the range of about 100 to about 150 Angstroms.

27. (original) The capacitor of claim 14, wherein the upper electrode has a conductive layer.

28. (original) The capacitor of claim 27, wherein the conductive layer is a layer of material selected from the group consisting of titanium nitride, tungsten nitride, platinum, and polysilicon.

29. (original) The capacitor of claim 14, wherein the upper electrode has a platinum layer and a platinum-rhodium layer on top of the platinum layer.

30. (original) The capacitor of claim 14, wherein the dielectric layer has a thickness of less than about 5000 Angstroms.

31. (original) The capacitor of claim 14, wherein the dielectric layer has a thickness of less than about 500 Angstroms.

32. (original) The capacitor of claim 14, wherein the dielectric material is a metallic oxide having a perovskite or ilmenite crystal structure and a dielectric constant of approximately 20 or higher.

33. (original) The capacitor of claim 14, wherein the dielectric material is selected from the group consisting of PLZT, PST, BBT, BT, and ST.

34. (original) The capacitor of claim 14, wherein the dielectric material is BST.

35. (original) The capacitor of claim 14, wherein the dielectric material is PZT.

36. (original) The capacitor of claim 14, wherein the dielectric material is SBT.

37. (original) The capacitor of claim 14, wherein the dielectric material is tantalum pentoxide.

38. (previously presented) A capacitor, comprising:

a lower electrode having a layer comprising a titanium material, an alloy layer on top of the layer comprising titanium, wherein the alloy layer consists of approximately 60 to approximately 97 percent platinum and approximately 3 to approximately 40 percent rhodium, and a non-oxide layer comprising platinum material on top of the alloy layer;

an upper electrode; and

a dielectric layer of a ferroelectric or high dielectric constant dielectric material formed between said lower and upper electrodes, wherein said dielectric layer is in contact with the layer comprising platinum material of said lower electrode.

39. (original) The capacitor of claim 38, wherein the titanium layer has a thickness within the range of about 60 to about 200 Angstroms.

40. (original) The capacitor of claim 38, wherein the titanium layer has a thickness within the range of about 60 to about 100 Angstroms.

41. (original) The capacitor of claim 38, wherein the alloy layer has a thickness within the range of about 100 to about 800 Angstroms.

42. (original) The capacitor of claim 38, wherein the alloy layer has a thickness within the range of about 150 to about 300 Angstroms.

43. (original) The capacitor of claim 38, wherein the platinum layer has a thickness within the range of about 50 to about 300 Angstroms.

44. (original) The capacitor of claim 38, wherein the platinum layer has a thickness within the range of about 50 to about 150 Angstroms.

45. (original) The capacitor of claim 38, further comprising a titanium nitride layer beneath the titanium layer.

46. (original) The capacitor of claim 45, wherein the titanium nitride layer has a thickness within the range of about 100 to about 200 Angstroms.

47. (original) The capacitor of claim 45, wherein the titanium nitride layer has a thickness within the range of about 100 to about 150 Angstroms.

48. (original) The capacitor of claim 38, wherein the upper electrode has a conductive layer.

49. (original) The capacitor of claim 48, wherein the conductive layer is a layer of material selected from the group consisting of titanium nitride, tungsten nitride, platinum, and polysilicon.

50. (original) The capacitor of claim 38, wherein the upper electrode has a platinum layer and a platinum-rhodium layer on top of the platinum layer.

51. (original) The capacitor of claim 38, wherein the dielectric layer has a thickness of less than about 5000 Angstroms.

52. (original) The capacitor of claim 38, wherein the dielectric layer has a thickness of less than about 500 Angstroms.

53. (original) The capacitor of claim 38, wherein the dielectric material is a metallic oxide having a perovskite or ilmenite crystal structure and a dielectric constant of approximately 20 or higher.

54. (original) The capacitor of claim 38, wherein the dielectric material is selected from the group consisting of BST, PZT, SBT, PLZT, PST, BBT, BT, ST and tantalum oxide.

124. (currently amended) A capacitor, comprising:

an electrode having at least one layer comprising a platinum-rhodium material and at least one non-oxide layer comprising a platinum material ~~on top of and~~ directly in contact with the platinum-rhodium layer, wherein the layer comprising platinum-rhodium material comprises approximately more than 20 percent rhodium.

125. (currently amended) A capacitor, comprising:

an electrode having at least one layer comprising a platinum-rhodium material and at least one non-oxide layer comprising a platinum material ~~on top of and~~ in direct contact with the platinum-rhodium layer, wherein the layer comprising platinum-rhodium material comprises approximately less than 10 percent rhodium.